

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-13 and 23-29 and 31 are pending in this application. While no claims are amended hereby, Applicants have provided a listing of the claims purely for the convenience of the Examiner.

Claims 1-13, 24, and 28-29 are withdrawn from consideration. It is submitted that the withdrawn claims should be reconsidered and reintroduced into the application when the independent claims from which they depend are found allowable.

II. RESTRICTION AND ELECTION

The Examiner did not find Applicants traversal of the restriction/election dated August 25, 2009, and made the requirement final. Applicants traverse. Accordingly, on November 25, 2009 Applicants petitioned the Director withdraw the Examiner's restriction/election and reissue the Office Action dated August 25, 2009, in which, inter alia, pending claims 1-2, 4, 6-8, and 13 are examined.

III. CLAIM REJECTIONS UNDER 35 U.S.C. §§102 & 103

Claims 23, 25-27 and 31 are rejected under 35 U.S.C. §102(b) or, in the alternative, over 35 U.S.C. §103 over U.S. Patent No. 5,857,497 to Gaisser in view of WO 01/88261 to Strandqvist (“Strandqvist”).

Claim 23 recites, *inter alia*: “A hydroentangling support fabric in a hydroentangling apparatus for the production of a hydroentangled nonwoven product, the improvement comprising flat filaments.” The Office Action admits that Gassier does not disclose a hydroentangling fabric or device. Instead the Office Action alleges the recitation is an intended use, and that Gaisser’s fabric is capable of being used in hydroentangling.

For the purposes of clarification, the claims recite a hydroentangling apparatus. Nonetheless, for the reasons given below, Applicants urge that Gassier’s fabric is not capable for use for hydroentangling.

Gassier discloses a papermaking fabric and in particular, a drying fabric. Hydroentangling and papermaking processes and devices have wholly different needs. For a non-limiting example that highlights such difference, Applicants draw attention to paragraph 31 of the publication of the Specification (hereafter the Specification):

The fabrics of the invention may be formed as single, double or triple layer weaves.... In such embodiment, the fibers of the nonwoven are supported by the round monofilaments of the forming side while the flat monofilaments promote greater reflective water flow, and therefore greater reflective entanglement energy, the fabric promotes greater entanglement of the fibers making up the nonwoven, and thereby provides for a stronger finished nonwoven. That is, when water is directed at the fabric in a direction perpendicular, or substantially perpendicular to the plane in which the flattened yarns lie, some water will pass through the forming surface layer and intermediate layer, reflect off the wearside layer, and further entangle the fibers. (Emphasis added)

Thus the design of the hydroentangling fabric requires, *inter alia*, permeability at the forming site surface and the intermediate layer, and yet must reflect at the wearside layer. Moreover, the fabric must be designed to provide the appropriate reflective water flow to effect entanglement.

Gassier, on the other hand explains how its papermaking fabrics must have different structural qualities. At col. 3, lines 16-19, Gassier states:

A fabric having increased fabric stability in the machine direction is provided yet having a high degree of openness and permeability in a range greater than thirty percent of the total fabric area.

And at col 4, lines 26-28

The drying process is outwardly from the heated cylinders through the paper web and through the dryer fabric. Thus sufficient permeability must be had in order to facilitate drying of the fabric.

And at Col. 6, lines 8-11

Increased structural stability is provided in the machine direction without decrease in the permeability or open area of the fabric.

And at Col. 1, lines 30-36

For drying purposes, the carrier fabric must have a high degree of openness and air permeability so that sufficient air is delivered through the base fabric and the embossed layer, which is also permeable for drying. Carrier fabric must have sufficient load bearing capability for bearing the loads in the machine direction which are the most severe.

Thus, it is clear that Gassier's highly permeable papermaking fabric is in no way designed for hydroentangling. It is respectfully requested that the Examiner give the instant claims their broadest reasonable interpretation in light of the specification.

MPEP 2111.01 (III) clearly states that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application. In the absence of an express intent to impart a novel meaning to the claim terms, the words should be presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art. It is the use of the words in the context of the written description **and** customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims. It has also been established that words in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning. Accordingly, the use of the term “hydroentangling” in the instant case, clearly, indicates that the support fabric of the instant invention is applicable only to hydroentangling machines and systems, and therefore one of ordinary skill in the nonwoven production art would not equate a papermaking fabric to a hydroentangling support fabric or even be motivated to use a papermaker’s fabric on a hydroentangling machine.

The Office Action newly cites Strandqvist as evidence that Gassier’s dryer fabric is “inherently capable” of use as a hydroentangling support fabric. However an ordinarily skilled artisan would understand Strandqvist shows it cannot.

Page 4, lines 7-11 of Strandqvist, cited by the Examiner, states:

The supporting member 12 which supports the fibre web during the hydroentanglement is constituted of a moulded, close-meshed plastic screen, for example the type disclosed in WO 92/1763 or in

WO 98/35742, and which according to these documents is utilized as a **base material** for a **press felt** of a paper machine.

Emphasis added. First, as amply explained in the prior responses, Gassier is a **dryer fabric** for a papermaking machine, **not a press felt**. On this point alone the Examiner's argument fails as inherency cannot rely on mere possibilities.

Moreover, the reference clearly states that its supporting member is "utilized as a **base material** for a press felt." In a press felt, a base material is provided with additional layers of batt which is adhered on with respect to the specific requirements with the felt. Indeed, in a press felt, one could not even see the base material. Such a fabric fails to have the structural requirements of a hydroentangling fabric, as amply described in prior responses, (e.g., permeability at the forming site surface and the intermediate layer, reflection at the wearside layer). Moreover, the fabric must be designed to provide the appropriate reflective water flow to effect entanglement. Thus, as ordinarily skilled artisans know, a papermaking fabric such as a press felt cannot be used as a support fabric for hydroentangling, as the press felt can only use the support member as a base material, and not as a hydroentangling support fabric. This also demonstrates that there is no logical connection between flat filaments of a papermaking fabric as applied to the needs of a hydroentangling support fabric.

Accordingly, Gassier does not anticipate or render obvious independent claim 23, and nothing in Strandqvist cures this deficiency. As all the pending claims ultimately depend from independent claim 23, and as nothing in Gassier cures its deficiency as applied to the independent claims, Applicants submit that all the claims are in condition for allowance and urging reconsideration and withdrawal of the rejections thereto.

Claims 23 and 25 to 27 and 31 and are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,142,752 to Greenway (hereinafter merely “Greenway”) in view of U.S. Patent No. 4,345,730 to Leuvelink (hereinafter merely “Leuvelink”). Applicants traverse and respectfully request reconsideration and withdrawal of these rejections.

Leuvelink relates to a link-belt for use in the context of papermaking machines and this is stated repeatedly throughout Leuvelink’s entire disclosure. As shown in prior responses, the same is true of Gassier. Moreover, Greenway clearly discloses the use of round wires. Thus again, a person of ordinary skill in the art would not be motivated to combine the teachings of Leuvelink or Gassier with that of Greenway merely because Greenway discloses a hydroentangling ‘module.’

The Examiner’s attention is drawn to Table I disclosed in col. 5, lines 45-60 of Greenway, which is reproduced herein below:

TABLE I

Property	Forming Screen Specifications	
	36 × 29 flat	16 × 14 flat
Warp wire - Polyester	.0157	.032
Round		
Shute wire - Polyester	.0157	.035
Round		
Weave type	plain mesh	plain mesh
Open area	23.7%	24.9%
Plane difference	---	.008° ± .003
Snag	light	none ± light
Weave tightness (slay)	no angular displacement	no angular displacement
Edges	filled $\frac{1}{2}$ " each side	filled $\frac{1}{2}$ " each side
Seam	invisible/endless	invisible/endless

Greenway also discloses that entangling member 44 in FIG. 4A, which is a 36x29 mesh weave having a 24% void area, **fabricated of polyester warp and shute round wire**. (Greenway -- col. 5, lines 14-17). Therefore, Greenway discloses the use of round wires for its forming screen and there is no motivation for one skilled in the art to modify the forming wire of

Greenway when there is clearly no teaching or suggestion in Greenway to use wires of other shapes.

The Examiner contends that it would have been obvious to use flat filaments because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics. However, the secondary reference, Leuvelink, in no way discloses a hydroentangling support fabric in a hydroentangling apparatus for the production of a hydroentangled nonwoven product.

Column 4, line 63 to Column 5, line 23 of Leuvelink, cited by the Office Action, explains that its invention is described in the context of papermaking. As explained above with respect to Gassier, papermaking fabrics and fabrics used in hydroentangling have differing structures; such terms in a claim recite more than a mere “intended use.” They reflect structural differences. In order to advance prosecution, the claims now recite a hydroentangling apparatus for the production of a hydroentangled nonwoven product, and a hydroentangling support fabric in a hydroentangling apparatus for the production of a hydroentangled nonwoven product.

Moreover, to the extent Leuvelink goes outside papermaking, it still limits itself to a spiral link fabric, allowing only some variation for spacing between successive coils, or the introduction of deformation of the hinge wire. Specifically, when Luvelink discloses that “Although the invention has been disclosed in the context of monofilaments of circular cross-section, it may be preferred in some instances to use monofilaments of different form, for example, of flat cross-section” (Luvelink – col. 5, lines 19-23) it refers to “the invention” as disclosed in Luvelink, which is a spiral link-belt having helical coils joined in side-by-side disposition. Therefore, only within this limited structured does Leuvelink allow for the use of flat monofilaments.

The Office Action proffers no evidence or reason showing that an ordinarily skilled artisan would use a spiral link fabric in a hydroentangling apparatus absent Applicant's own disclosure of the same in the present application. The Supreme Court in *KSR* has warned against the dangers hindsight reasoning, especially when substitutes are not the result of "common sense." Applicants respectfully note that *KSR v. Teleflex* ("KSR") cautions that hindsight reasoning based on the Applicants' own disclosure distorts analysis: "[a] factfinder should be aware, of course, of the distortion cased by hindsight bias and must be cautious of arguments reliant on ex post reasoning." Emphasis added. As MPEP 2174 "Legal Concept of Prima Facie Obviousness" states:

[T]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown and just before it was made. In view of all factual information, the examiner must then make a determination whether the claimed invention "as a whole" would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the "differences," conduct the search and evaluate the "subject matter as a whole" of the invention. The tendency to resort to "hindsight" based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art.

The Office Action also alleges the motivation for combining Leuvelink's flat monofilaments with Greenway's conveyor belts is "the expectation of successfully practicing the invention of Greenway." However, the Office Action's reasoning is improper as, assuming for the sake of argument that Greenway's conveyor belts are for hydroentangling, Greenway certainly does not teach that its invention cannot be successfully practiced. To the contrary, Greenway assumes the use of conventional hydroentangling fabrics, i.e. those with all round

yarns (as evidenced above). It certainly does not teach, implicitly or expressly, than the successful operation of its entangling member, conveyor means, or curtain above its conveyor means is in any way dependent on flat monofilaments.

In view of Greenway's reliance on conventional nonwoven production lines (see col. 2, lines 11-17), an ordinarily skilled artisan would have no recourse, reason or need to turn to Leuvelink's spiral-link fabric, embodied exclusively as a papermaking fabric.

Accordingly, Applicants believe claim 23 is presently in condition for allowance and propose urging reconsideration and withdrawal of the rejections thereto. As all the remaining pending claims ultimately depend from these independent claims and as nothing in the art of record cures the deficiency of the Greenway and Leuvelink references, Applicants urge reconsideration and withdrawal of these rejections as well.

Claims 23, 25-27, and 31 are newly rejected under 35 U.S.C. § 103(a) over Bunting in view of Denton. Bunting discloses a "smooth supporting member" for hydroentangling, which is "a relatively smooth screen of sufficiently fine mesh so that the fibers are not rearranged into any pattern dependent on the screen pattern." See col. 2 line 64 to col. 3, line 3." The smooth support member may also be a "solid plate, bar, or the like." *Id.*

Thus the "smoothness" of Bunting does not in any way refer to the shape or construction of the filaments forming the screen. Rather, the smoothness refers to the fineness of the mesh. This is confirmed by the examples at columns 14-30 of Bunting, where all the screens – which are woven wire screens – are described in terms of wires per inch and open area. See, e.g., column 16, line 1-8. To the extent that Bunting discusses smoothness, it is referring to mesh, not to filaments, and moreover, Bunting regards the smoothness issue fully addressed by mesh size.

Moreover, at the time of Bunting's filing date, belts at that time were woven metallic wires. Thus an ordinarily skilled artisan would understand that, as the wires are metal, there are only round wires. Further, as shown at col 8, lines 37-38, the Bunting belt does not even have to be permeable—it can be a solid belt. So nothing in Bunting re the shape elements of the woven fabric belt teaches there is any effect on consolidation of the nonwoven web produced theron. Indeed, even when Bunting discloses a woven screen on a cylinder, col. 10, lines 21-24 the screen is described as "fine mesh." Col. 24, line 70 to col. 25 ln. 10 that the belt to has little effect on either patterning or fiber reorientation of a nonwoven. To the contrary, the claims recite flattened filaments, which as explained throughout prosecution, have just such an effect (i.e. greater reflective water flow, and therefore greater reflective entanglement energy, ... [thus] greater entanglement of the fibers making up the nonwoven). See Paragraph 31 of the present Specification.

Denton refers fabrics for Paper Machine Clothing (PMC). As pointed out throughout prosecution and above, PMC fabrics have different needs and structural requirements than those of hydroentangling. Moreover, the "smoothness" referred to is that of the knuckle size of fibers at the point they are woven, not mesh size. The solution is a bicomponent filament that fuses at the knuckles. As explained at col. 6, lines 12-19, "knuckle size is reduced upon heat fusion of the bicomponent fibers, which improves the surface smoothness." Thus not only is Denton for a different fabric, but it is referring to a different kind of "smoothness" that Bunting, namely, one that is unconcerned with mesh or openness.

As Bunting regards its smoothness as fully addressed by mesh size, it provides no reason for going outside the reference to find the wholly different filament material of Denton in a

different fabric with different structural needs, and then reshaping and reconfiguring that material.

Claims 23, 25-27 and 31 were rejected under 35 USC § 103 (a) over U.S. Patent No. 5,883,022 to Elsener (hereinafter merely “Elsener”) in view of any one of U.S. Patent No. 3,884,630 to Schwartz (hereinafter merely “Schwartz”) or U.S. Patent No. 4,104,814 to Whight (hereinafter merely “Whight”). Applicants traverse and respectfully request reconsideration and withdrawal of the rejections.

As understood by the Applicants, Elsener is a textile fabric for use in clinical areas or clean rooms. The towel is for drying hands and skin. Specifically, Elsener discloses an absorbent fabric material of synthetic endless fibers, in particular for use in clinical areas and also clean room areas and also in company and public washrooms (Elsener -- Abstract). Therefore, Elsener has absolutely nothing to do with endless or continuous industrial process fabrics whatsoever.

As understood by the Applicants, Schwartz relates to a towel apparatus which handles an endless towel within a cabinet and subjects the same to cleaning and drying making use of a low vapor pressure chemical type solvent. (Schwartz -- Abstract)

As understood by the Applicants, Whight relates to a clean towel presenting machine, which includes an endless web of liquid absorbent material contained in a casing to discontinuously present a clean portion and simultaneously retract an essentially equal used portion through an intake slot, a cleaning liquid tank and a heater to dry and sterilize the web. (Whight -- Abstract).

In view of the extensive discussions of hydroentangling fabrics above and in prior responses, it almost goes without saying that an ordinarily skilled artisan would not look to hand towels for teachings on industrial process belts. As indicated above, MPEP 2111.01 (III) clearly

states that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application. In the absence of an express intent to impart a novel meaning to the claim terms, the words should be presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art. It is the use of the words in the context of the written description and customarily by those skilled in the relevant art that accurately reflects both the “ordinary” and the “customary” meaning of the terms in the claims. It has also been established that words in patent claims are given their ordinary meaning in the usage of the field of the invention, unless the text of the patent makes clear that a word was used with a special meaning. Accordingly, the use of the term “hydroentangling” in the instant case, clearly, indicates that the support fabric of the instant invention is applicable only to hydroentangling machines and systems, and therefore one of ordinary skill in the clean towel art would not equate a clean towel to a hydroentangling support fabric or even be motivated to use a clean towel on a hydroentangling machine.

The Office Action regards hydroentangling as “an intended use,” and thereby argues that Elsener’s, Schwartz’s, and Whight’s towels can be used as a hydroentangling fabric. Applicants refer to Exhibits A-C, submitted in the Amendment and Response dated April 3, 2009, which discuss, in general, the type of fabrics used in a hydroentangling process. Applicants refer in particular to, for example the photographs of Figures 5-8 of Exhibit A and Figures 2a to 2c of Exhibit B. The Exhibits show that Elsener’s, Schwartz’s, and Whight’s towels are not hydroentangling support fabrics and could in no way be used a hydroentangling fabric.

Applicants respectfully submit that none of these references teach or suggest a hydroentangling support fabric in a hydroentangling apparatus for the production of a

hydroentangled nonwoven product, as recited in the instant claims. Thus nothing in Elsener, Schwartz, or Whight discloses or otherwise renders obvious each of the limitations of the independent claims. Dependent claims 2, 4, 6-8, 13 and 25-27 depend from either claim 1 or claim 23 discussed above, and are therefore patentable for similar reasons.

As nothing in the art of record cures this deficiency, Applicants propose urging all the claims are in condition for allowance.

CONCLUSION

In view of the foregoing amendments and remarks, all of the claims in this application are patentable over the prior art, and early and favorable consideration thereof is solicited.

In the event that the Examiner disagrees with any of the foregoing comments concerning the disclosures in the cited prior art, it is requested that the Examiner indicate where in the reference, there is the basis for a contrary view.

Please charge any fees incurred by reason of this response and not paid herewith to Deposit Account No. 50-0320.

If any issues remain, or if the Examiner has any further suggestions, the Examiner is invited to call the undersigned at the telephone number provided below. The Examiner's consideration of this matter is gratefully acknowledged.

Respectfully submitted,
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